

Claims

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We Claim:

1. An exercise device comprising:
  - a frame;
  - a body extension mechanism including:
    - a press plate mechanism operably connected to the frame;
    - a seat structure having a seat and a back support, the back support being pivotally connected with the frame; and
    - a transfer link having a first end and a second end, the first end being operably connected with the press plate mechanism, and the second end being operably connected with the back support.
2. The exercise device of claim 1 wherein the press plate mechanism includes at least one link pivotally connected with the front frame portion.
3. The exercise device of claim 2 wherein the press plate mechanism includes:
  - a top link having a front top link portion, a rear top link portion, and an upper portion;
  - a plate connected with the upper portion;
  - a front link pivotally connected with the front top link portion, the front link pivotally connected with the front frame portion; and
  - a rear link pivotally connected with the rear top link portion, the rear link pivotally connected with the front frame portion rearwardly of the front link; andwherein said top link, plate, front link and rear link form a four-bar linkage.
4. The exercise device of claim 1 further including at least one shock operably connected between said press plate mechanism and said frame.
5. The exercise device of claim 4 further including at least one shock having a top pivotally connected with the top link and having a bottom pivotally connected with the frame.
6. The exercise device of claim 1, wherein:
  - Said link has a front portion defining a channel, and a rear link portion;
  - Said rear link portion being insertable in the channel so that the length of the transfer link is adjustable.
7. The exercise device of claim 1, wherein:

the articulating seat structure further includes an over-center back support adjustment mechanism whereby the orientation of the back support with regard to the seat may be adjusted.

8. The exercise device as defined in claim 1, further comprising:  
A weight stack having at least one weight plate.

9. The exercise device as defined in claim 8, further comprising:  
A cable operably connected between the body extension mechanism and the weight stack.

10. The exercise device as defined in claim 1, further comprising:  
A weight stack having at least one moveable weight plate;  
A cable operably connected between the body extension mechanism and said moveable weight plate; and  
Wherein the movement of said body extension mechanism causes said transfer link to move, thus tensioning said cable to move said at least one weight plate, and as causing said back support to pivot about its connection with said frame.

11. An exercise device comprising:  
a frame having a front frame portion and a rear frame portion;  
a first transfer pulley connected with the rear frame portion;  
a second transfer pulley connected with the rear frame portion below the first transfer pulley;  
a third transfer pulley connected with the front frame portion;  
a weight stack structure including:  
a lower portion and an upper portion;  
a weight stack having at least one weight plate;  
a first lift pulley connected with the upper portion;  
a second lift pulley connected with the upper portion above the weight stack;  
and  
a lower pulley connected with the lower portion;  
a body extension mechanism including:  
a press plate mechanism pivotally connected with the frame;  
an articulating seat structure pivotally connected with the frame;  
a transfer link connected between the press plate mechanism and the articulating seat structure; and  
a weight transfer pulley; and

a cable having a first end and a second end, the first end connected with the frame, the cable routed from the connection with the frame to the weight transfer pulley, then to the first transfer pulley, then to the second transfer pulley, then to the third transfer pulley, then to the lower pulley, then to the first lift pulley, then to second lift pulley, and then the cable connected with the weight stack.

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